SONY

4-278-253-**11**(1)

Flash

HVL-F58AM

Operating Instructions

© 2010 Sony Corporation

English

Before operating the product, please read this manual thoroughly and retain it for future reference.

WARNING

To reduce fire or shock hazard, do not expose the unit to rain or moisture.

Tape over lithium battery contacts to avoid short-circuit when disposing of batteries, and follow local regulations for battery disposal.

Keep batteries or things that could be swallowed away from young children. Contact a doctor immediately if an object is swallowed.

Immediately remove the batteries and discontinue use if...

- the product is dropped or subjected to an impact in which the interior is exposed.
- the product emits a strange smell, heat, or smoke.

Do not disassemble. Electric shock may occur if a high voltage circuit inside the product is touched.

IMPORTANT SAFETY INSTRUCTIONS

When using your photographic equipment, basic safety precautions should always be followed, including the following:

Read and understand all instructions before using.

Close supervision is necessary when any appliance is used by or near children. Do not leave appliance unattended while in use.

Care must be taken as burns can occur from touching hot parts.

Do not operate appliance with a damaged cord or if the appliance has been dropped or damaged- until it has been examined by a qualified serviceman.

Let appliance cool completely before putting away. Loop cord loosely around appliance when storing.

To reduce the risk of electric shock, do not immerse this appliance in water or other liquids.

To reduce the risk of electric shock, do not disassemble this appliance, but take it to a qualified serviceman when service or repair work is required. Incorrect reassembly can cause electric shock when the appliance is used subsequently.

The use of an accessory attachment not recommended by the manufacturer may cause a risk of fire, electric shock, or injury to persons.

Batteries may become hot or explode due to improper use.

Use only the batteries specified in this instruction manual.

Do not install the batteries with the polarity (+/-) reversed.

Do not subject batteries to fire or high temperatures.

Do not attempt to recharge (except for rechargeable batteries), short or disassemble.

Do not mix, batteries of different types, brands or ages.

SAVE THESE INSTRUCTIONS

CAUTION

Do not touch the flashtube during operation, it may become hot when the flash fires.

For customers in Europe

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local Civic Office, your household waste disposal service or the shop where you purchased the product.

Notice for the customers in the countries applying EU Directives

The manufacturer of this product is Sony Corporation, 1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan. The Authorized Representative for EMC and product safety is Sony Deutschland GmbH, Hedelfinger Strasse 61, 70327 Stuttgart, Germany. For any service or guarantee matters please refer to the addresses given in separate service or guarantee documents.

For the customers in the U.S.A.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

Table of Contents

Features 9
Name of parts 10

Preparations

Inserting batteries 15
Attachment and removal of the flash unit 18
Turning on the power 20
Changing the flash mode 22
LCD panel illuminator 24

Basics

Program auto flash (The basics) 25
Using flash in each recording mode of the camera 29

Applications

Test-flash 31
Zoom flash coverage 32
Bounce flash 36
Close-up photography (downward bounce) 41
Manual flash (M) 43
High-speed sync (HSS) 47
Multiple flash (MULTI) 48
Wireless flash mode (WL) 54
Connecting camera and flash by cable 69
Using external battery adaptor 71
AF illuminator 72
Reset to the default settings 73
Custom setting 74

Additional Information

Notes on use 81
Maintenance 83
Specifications 84

Before use

Use this unit in combination with a camera that has an accessory shoe.
For details, refer to the operating instructions supplied with your camera.

This flash unit is not dust-proof, splash-proof or waterproof.

Do not place this flash unit in the following locations

Regardless of whether this flash unit is in use or in storage, do not place it in any of the following locations. Doing so may lead to a malfunction.

- Placing this flash unit in locations subject to direct sunlight such as on dashboards or near a heater may cause this unit to deform or malfunction.
- Locations with excessive vibration
- Locations with strong electromagnetism
- Locations with excessive sand
  In locations such as the seashore and other sandy areas or where dust clouds occur, protect the unit from sand and dust.
  This may lead to a malfunction.

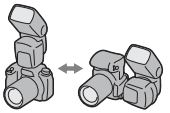
Features

The HVL-F58AM is a functional, clip-on flash that provides a large flash output with a guide number of 58 (105 mm position, ISO 100 · m). ➡ page 84

Can be used with compatible lenses to enable ADI (Advanced Distance Integration) flash metering, which is not affected by the reflection rate of the background or subject. ➡ page 43

Enables wireless High-speed Sync. ➡ page 47

Quick shift bounce function enables you to set the upper or side position easily during bounce flash photography. ➡ page 36



Built-in bounce sheet enables you to create a highlight in the subject's eyes. ➡ page 36

Equipped with a wide, easy-to-see LCD panel. ➡ page 13

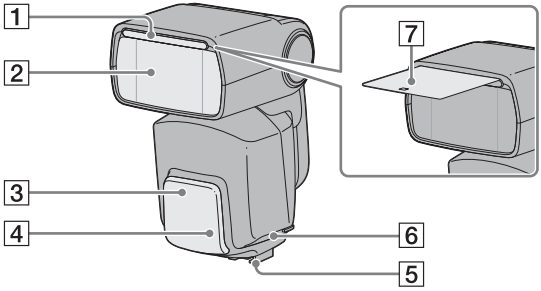
This flash unit supports flash coverage to a focal length of 16 mm by using a built-in wide panel when the flash is triggered. ➡ page 34

Corrects the white balance automatically using the color temperature information.* ➡ page 28

Adjusts the optimum flash coverage according to the image sensor size of the camera.* ➡ page 32

* When Sony digital single-lens reflex camera (other than the DSLR-A100) is used.

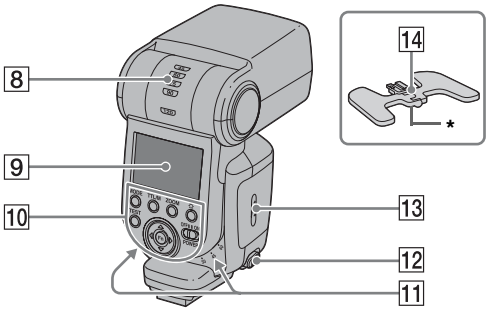
Name of parts



1 Built-in wide panel (page 34)
2 Flashtube
3 Wireless control signal receiver (page 54)
4 AF illuminator (page 72)

Remove the protective sheet from the front of the AF illuminator before use.

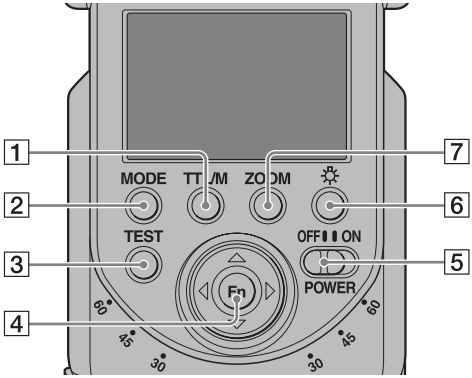
5 Mounting foot (page 18)
6 Terminal cap (page 69, 71)
7 Bounce sheet (page 36)



8 Bounce indicator (upper angle) (page 36)
9 LCD panel (page 13)
10 Control panel (page 12)
11 Bounce indicator (side angle) (page 36)
12 Mounting-foot release button (page 19)
13 Battery-chamber door (page 15)
14 Mini-stand (page 57)
* Tripod mount

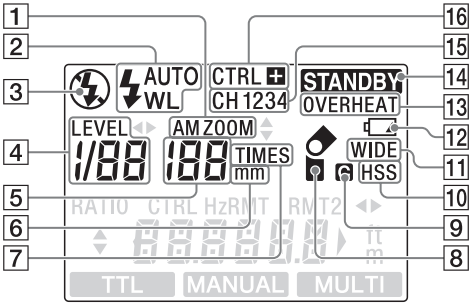
Continued on the next page

Control panel



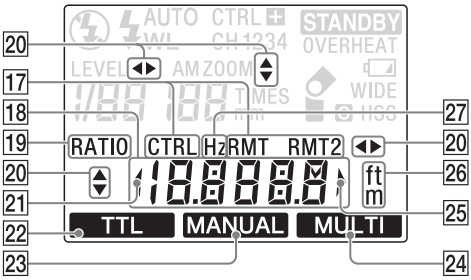
1 TTL/M (MANUAL/MULTI) button (page 44, 48, 61, 66, 73)
2 MODE button (page 22)
3 TEST button (page 31)
The status while the lamp is lit
Amber: Flash ready
Green: Proper exposure
4 Fn (function)/direction buttons (page 44, 48, 61, 64, 66, 74)
5 POWER switch (page 20)
6 LCD illuminator button (page 24)
7 ZOOM button (page 32)

LCD panel



1 Zoom indicator (page 32)
2 Flash mode indicator (page 22, 61, 64, 66)
3 Flash-OFF indicator (page 22)
4 Power-level indicator (page 43, 48)
5 Zoom/Multiple-flash repetition display (page 32, 48)
6 mm indicator (page 32)
7 TIMES indicator (page 48)
8 Bounce indicator (page 36)
9 Custom indicator (page 74)
10 High-speed-sync indicator (page 47)
11 Wide-panel indicator (page 34)
12 Low-battery indicator (page 16)
13 OVERHEAT indicator (page 17)
14 STANDBY indicator (page 21)
15 Wireless channel indicator (page 54)
16 Wireless controller indicator (page 54)

Continued on the next page



17 Wireless controller/remote indicator (page 54)

18 Flash-range/Multiple-flash frequency/flash-ratio display (page 27, 48, 66)

19 Ratio-flash indicator (page 66)

20 Operating indicator (page 78)

21 Flash-range-warning (near side) indicator (page 27, 43)

22 TTL indicator (page 43)

23 Manual-flash indicator (page 43)

24 Multiple-flash indicator (page 48)

25 Flash-range-warning (far side) indicator (page 27, 43)

26 ft/m indicator (page 27, 43)

27 Hz indicator (page 48)

Inserting batteries

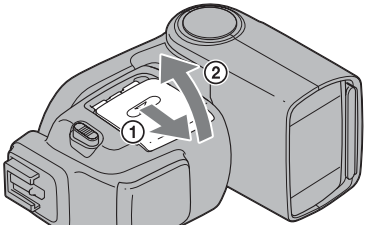
The HVL-F58AM may be powered by :

- Four AA-size alkaline batteries*
- Four AA-size rechargeable nickel-metal hydride (Ni-MH) batteries*

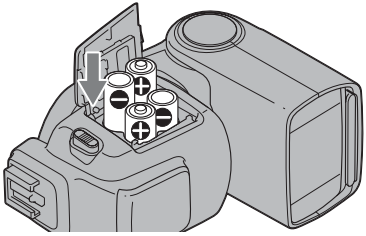
  * Batteries are not supplied.

  Always ensure that rechargeable nickel-metal hydride batteries are charged in the specified charger unit.

1 Open the battery-chamber door as shown.



2 Insert the batteries in the battery chamber as in the diagram.



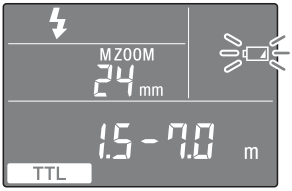
3 Close the battery-chamber door.

- Follow the reverse procedure when opening the battery-chamber door.

Continued on the next page

Checking Batteries

The indicator on the data panel blinks when the batteries are low.



blinking
Changing the batteries is recommended.
The flash unit can still be used when the TEST button lights up in amber.

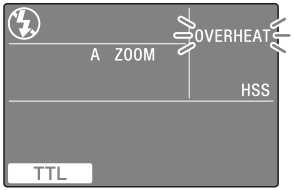
Only blinking
Flash cannot be used.
Insert new batteries.

- If nothing appears on the LCD panel when the POWER switch is set to ON, check the orientation of the batteries.

OVERHEAT indicator

When the temperature of this unit rises at the time of continuous flash use or use in a high temperature environment, the flash suspends operation automatically.

- The OVERHEAT indicator blinks when overheating is detected.
- The flash operation is suspended until the temperature of the unit falls.
- Set the POWER switch to OFF, and then stop use of the flash unit for Approx. 10 minutes to allow the temperature of the unit to cool down.

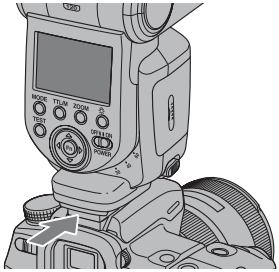


Attachment and removal of the flash unit

Attaching the flash unit to the camera

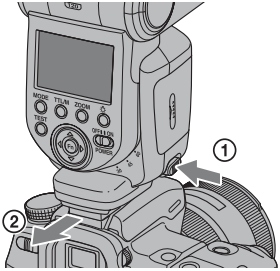
With the flash unit turned off, push the mounting foot firmly and fully into the accessory shoe of the camera.

- The flash unit is locked in place automatically.
- If the built-in flash in the camera is protruding, lower it before attaching the flash unit.
- This unit is only suitable for an accessory shoe.
  You cannot use this unit with a camera that has no accessory shoe.



Removing the flash unit from the camera

While pressing the mounting-foot release button ①, remove the flash unit ②.

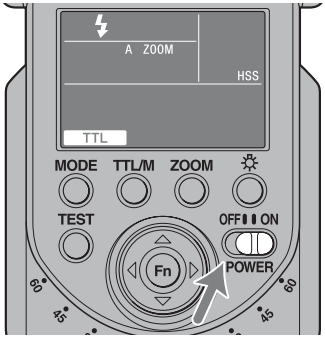


Turning on the power

Set the POWER switch to ON.

The power of the flash unit turns on.

- When the power of the flash unit is turned on, the LCD panel lights up.



To turn the power off

Set the POWER switch to OFF.

Power save mode

When the camera or flash unit is not used for three minutes, the flash unit changes to power save mode to save the batteries and STANDBY indicator appears on the LCD panel.

- During wireless flash photography (page 54), the flash unit changes to power save mode after 60 minutes.
- You can change the time until power save, or disable power save. (page 74)
- The flash unit turns into power save mode automatically when the POWER switch of the camera is set to OFF.*

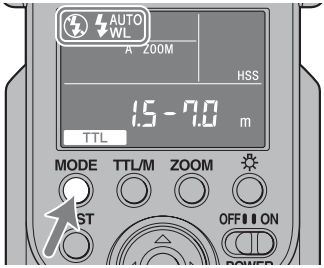
  * When Sony digital single-lens reflex camera (other than DSLR-A100) is used.
- Since your camera does not communicate with the flash unit, the flash mode, the switching in TTL/M mode, power save, and the wide panel display are not interlocked with your camera when the camera is in power save mode or the LCD monitor is set to off.

Changing the flash mode

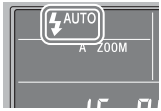
Press the MODE button.

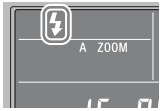
- The indicator on the LCD panel changes as follows.
  When the flash unit is not connected to your camera, or when the camera is in power save mode or the LCD monitor is being turned off when the flash unit is connected to your camera:
  ϟ (ϟ AUTO) → ϟ WL → ⊛ → ϟ (ϟ AUTO) → . . .

  When your camera is turned on and the flash unit is connected to your camera (WL is not set up) :
  ϟ (ϟ AUTO) → ⊛ → ϟ (ϟ AUTO) → . . .



- [ϟ AUTO] lights up when the camera is set to Autoflash. Only [ϟ] lights up when the camera is set to Full-flash.





About flash mode

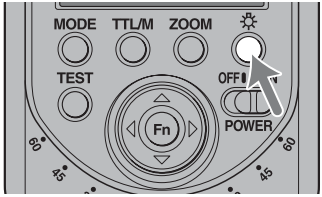
- (Fill-flash mode)
  The flash unit always fires.
- AUTO (Auto flash mode)
  The flash unit is set to this mode when the camera is set to auto flash.
- WL (Wireless flash mode)
  This mode is used during wireless flash photography.
- (Un-full-flash mode)
  The flash unit does not fire.

LCD panel illuminator

Illuminates the data panel at low-light levels.

Press the ☼ button.

- The LCD panel is illuminated for approximately eight seconds. This period is extended if the flash or camera is used during this time.
- Press the ☼ button again while the LCD panel is illuminated to extinguish the LCD panel illuminator.

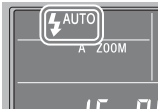


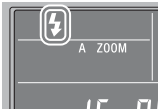
Program auto flash (The basics)

1 Select the P mode on the camera.

2 Press the MODE button to display [AUTO] or [ ] on the LCD panel.

- [AUTO] lights up when the camera is set to Autoflash. Only [ ] lights up when the camera is set to Full-flash.

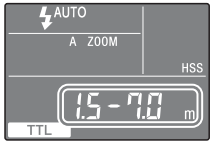




Continued on the next page

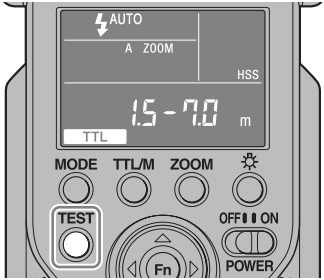
3 Press the shutter button halfway down and make sure that the subject is within the flash range.

- See page 27 for details on the flash range.

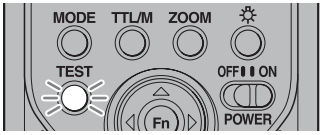


4 When the flash unit is charged, press the shutter button to take a photo.

- The flash unit is fully charged when the TEST button on the control panel is lit in amber. You can also confirm that the flash unit is fully charged by the lighting of the " ⚡ " indicator in the camera viewfinder.



When the correct exposure has been obtained for the photo just taken, the TEST button on the control panel blinks in green.

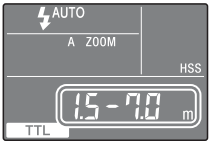


- The photo will be under-exposed because of a lack of luminescence if taken before charging is complete.
- Press the shutter button after making sure that charging is complete when using the flash unit with the self-timer.
- If your camera has an AUTO mode or Scene Selection mode, they are dealt with here as program auto.
- The flash mode selected (auto flash (AUTO), fill-flash (), or un-full-flash ()) depends on your camera. For details, refer to the operating instructions of your camera.

Flash range

Press the shutter button halfway down.

The flash range for the proper exposure is displayed on the LCD panel. Make sure that the subject is within this range and then take the photo.



Continued on the next page

The range that can be displayed on the LCD panel is from 1.5 m to 28 m (0.7 m to 28 m for downward bounce; see page 41). When the distance is beyond this range, ◀ or ▶ is lit on either side of the Flash range.

Proper exposure is obtained at less than 1.5 m.

Proper exposure is obtained from 1.5 m to 28 m or more.

- The flash range is not shown when using flash bounce above, with wireless flash, or when off-camera cables are used.
- When photographing beyond the lower limit of the flash range, the photo may be over-exposed even if the TEST button blinks in green, or the bottom of the picture may darken. Always photograph within the indicated flash range.

Auto WB Adjustment with Color Temperature Info

The flash unit sends color temperature info to an α camera. Color temperature is automatically adjusted to standard white by an α camera.

- This function works with TTL flash mode using the clip-on connection with the camera.
- This function does not work during manual flash photography.

Using flash in each recording mode of the camera

This section explains how to use the flash unit in each recording mode of the camera.

Aperture priority flash photography (A)

1 Select the A mode on the camera.

2 Press the MODE button to display [ϟ].

- Fill-flash is selected.

3 Set the aperture and focus the subject.

- Reduce the aperture (i.e. increase the f-stop) to reduce the flash range, or open the aperture (i.e. reduce the f-stop) to increase the flash range.
- The shutter speed is set automatically.

4 Press the shutter button when charging is complete.

Continued on the next page

Shutter speed priority flash photography (S)

1 Select the S mode on the camera.

2 Press the MODE button to display [ϟ].

- Fill-flash is selected.

3 Set the shutter speed, and focus the subject.

4 Press the shutter button when charging is complete.

Manual exposure mode flash photography (M)

1 Select the M mode on the camera.

2 Press the MODE button to display [ϟ].

- Fill-flash is selected.

3 Set the aperture and shutter speed, and focus the subject.

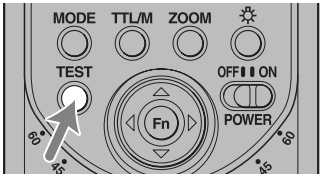
- Reduce the aperture (i.e. increase the f-stop) to reduce the flash range, or open the aperture (i.e. reduce the f-stop) to increase the flash range.

4 Press the shutter button when charging is complete.

Test-flash

You can try a test flash before shooting. Check the light level using the test flash when you use a flash meter, etc., in the manual flash (M) mode.

Press the TEST button when the TEST button lights up in amber.



- The light level of the test-flash depends on the light level setting (page 43). The flash unit fires with a light level of 1/1 in TTL mode.
- You can check shadows on the subject before taking photos with the test-flash (modeling flash) function. The flash unit has two modeling flash modes, three times flashes mode and modeling flash mode in which the flash unit fires repeatedly for four seconds. For details on setting the test-flash mode, see "Custom setting" (page 74).

TEST button

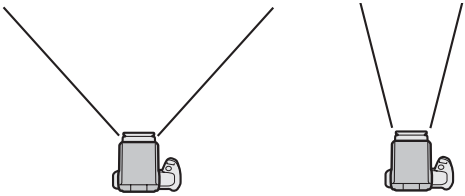
The TEST button is turned on as follows, according to the current state of the flash unit.

- Amber: Flash ready
- Green: Proper exposure

Zoom flash coverage

Auto zoom

This flash unit automatically switches optimum flash coverage (zoom flash coverage) to cover a range of focal lengths from 24 mm to 105 mm when photographing (auto zoom). Normally, you do not need to switch the flash coverage manually.
The auto zoom is working when [A ZOOM] is displayed on the LCD panel. The zoom is not displayed on the LCD panel when [A ZOOM] is displayed.



24 mm focal length 105 mm focal length

- When a lens having a focal length of less than 24 mm is used with auto zoom, [WIDE] on the LCD panel blinks. Use of the built-in wide panel (page 34) is recommended in this case to prevent darkening at the periphery of the image.

Auto zoom control optimized for image sensor size

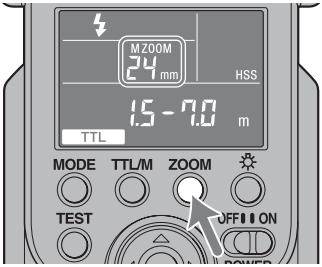
By using a Sony digital single lens reflex camera, other than the DSLR-A100, with this flash unit, the flash unit will provide optimal flash coverage according to the image sensor size (APS-C format/35 mm-format) of the camera.

Manual zoom

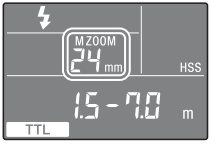
You can manually set the flash coverage regardless of the focal length of the lens in use (manual zoom).

Press the ZOOM button to select the flash coverage to be set.

- The zoom coverage is changed in the following order.
  105 mm → 70 mm → 50 mm → 35 mm → 28 mm → 24 mm → A ZOOM → 105 mm → . . .



- When zoom is set manually, [M ZOOM] is displayed above zoom coverage.



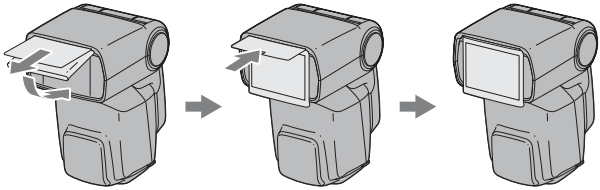
- If the flash coverage is set to less than the focal length of the lens in use, the periphery of the screen darkens.
- The flash coverage of the manual zoom on the LCD panel is the angle of view of the 35mm-format focal length.

Continued on the next page

Built-in wide panel (16 mm zoom angle)

Pulling out the built-in wide panel expands flash coverage to a focal length of 16 mm.

Pull out the wide panel and set it at the front of flash tube, and then push back the bounce sheet.



- [WIDE] is displayed on the LCD panel.
- When putting back the wide panel, push it back in completely.
- Do not pull out the wide panel forcibly. This may damage the wide panel.
- When photographing a flat subject from the front at a focal length of about 16 mm, the periphery of the screen may darken slightly because the focal distances at the center and periphery of the screen are different.
- When using a wide-angle lens with a focal length below 16 mm, the periphery of the screen may darken.
- The focal length corresponds to the equivalent 35mm-format focal length.
- This flash unit does not support the angle of view of a 16 mm F2.8 Fisheye lens.
- Push back the wide panel and the bounce sheet into the inside of the flash head when this flash unit is stored in the supplied case.

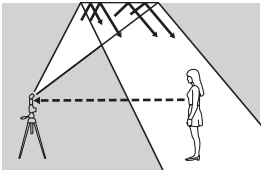
Flash coverage & focal length

The larger the focal length figure of the lens on a camera, the further away a subject can be photographed to take up the full screen; but the area that can be covered becomes smaller. Conversely, with a smaller focal length figure, subjects can be photographed with wider coverage. The flash coverage is the area that the light from the flash at a set intensity or greater can cover evenly, expressed as an angle. The flash coverage at which you can photograph is determined by the focal length.

By having flash coverage determined in accordance with focal length, flash coverage can be expressed as the figure for focal length.

Bounce flash

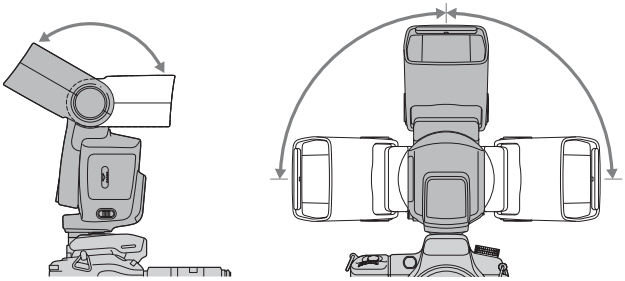
Using the flash unit with a wall directly behind the subject produces strong shadows on the wall. By directing the flash unit at the ceiling you can illuminate the subject with reflected light, reducing the intensity of the shadows and producing a softer light on the screen.



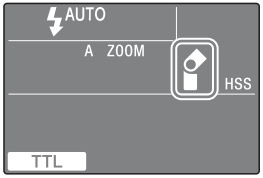
Bounce flash

Normal flash

Rotate the flash unit upwards or to the left and right while holding the camera firmly.



- appears on the LCD panel.



The flash may be set to the following angles.

- Upwards: 45°, 60°, 75°, 90°, 120°, 150°
- Downwards: 10° (see “Close-up photography (downward bounce)” page 41)
- Right: 30°, 45°, 60°, 90°
- Left: 30°, 45°, 60°, 90°

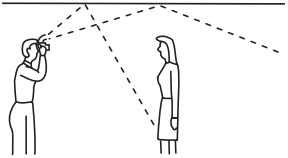
Continued on the next page

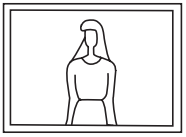
- When the flash is rotated upwards, the flash range is not displayed on the LCD panel. High-speed sync (page 47) is also cleared.
- When the flash is rotated upwards, the bounce indicator does not appear.
- Use a white ceiling or wall to reflect the flash. A colored surface may color the light. High ceilings or glass are not recommended.

Adjusting bounce angle

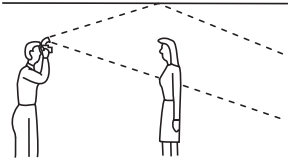
Simultaneously using direct light and bounced light from the flash unit produces uneven lighting. Determine the bounce angle with respect to the distance to the reflective surface, the distance from the camera to the subject, the focal length of the lens, etc.

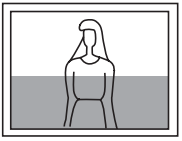
Correct





Incorrect





When the flash is bounced upwards

Determine the angle in relation to the following table.

Focal length of lens	Bounce angle
70 mm minimum	45°
28 - 70 mm	60°
28 mm maximum	75°, 90°

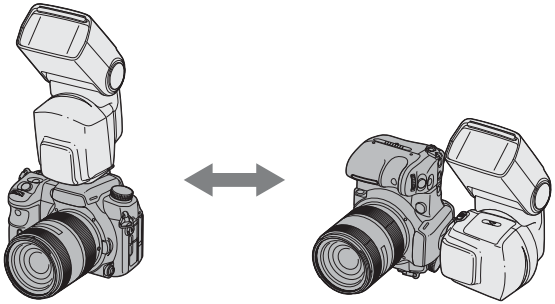
Using the bounce sheet

The bounce sheet creates a highlight in the subject's eyes and makes the subject look more vibrant.

- The bounce sheet is pulled out when the wide panel is pulled out. Push back the wide panel.
- When using the bounce sheet, set the bounce angle to 90° upwards.

Quick shift bounce

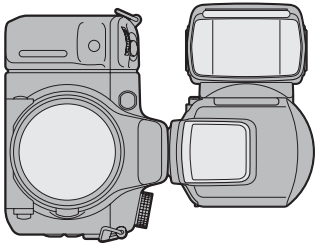
When shooting in the portrait position, you can set the same bounce flash as that used when shooting in the landscape position, and also use the control panel at proper direction.



Continued on the next page

90° sideways bounce

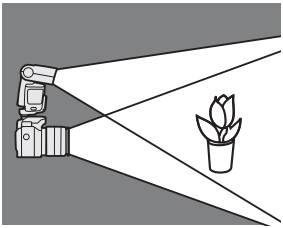
When the bounce angle is set to 90° sideways and 0° upwards while shooting in the portrait position, the top and bottom of the photo may darken. In this case, use the built-in wide panel or set the bounce angle to 0° sideways.



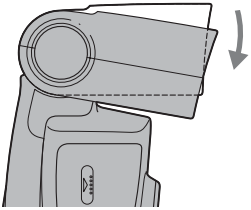
- blinks on the LCD panel.
- When the zoom flash coverage is set to [A ZOOM] while using 90° sideways bounce, the coverage is adjusted automatically to the wide angle. In this case, the flash range is shorter than that for 0° sideways bounce.

Close-up photography (downward bounce)

Tilt the flash slightly downwards when photographing objects between 0.7 m and 1.5 m from the camera to ensure accurate illumination.



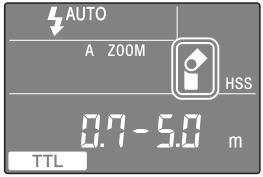
Rotate the flash downwards with holding the camera firmly.



- The rotation angle is 10°.

Continued on the next page

- appears on the LCD panel.

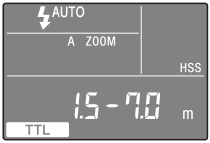


- When photographing at a distance closer than 0.7 m, the flash will not be able to completely cover the subject and the bottom of the picture will be darker. Use an off-camera flash, Macro Twin Flash, or Ring Light.
- The downward bounce can be used only when the bounce angle is set to 0° or 90° sideways.
- The lenses with long length may obstruct the flash light.

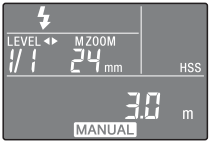
Manual flash (M)

Normal TTL flash metering automatically adjusts the flash intensity to provide the proper exposure for the subject. Manual flash provides a fixed flash intensity irrespective of the brightness of the subject and the camera setting.

- Manual flash can only be used when the camera is in the M mode. In other modes, TTL measuring is selected automatically.
- As manual flash is not affected by the reflectivity of the subject, it is convenient for use with subjects with extremely high or low reflectivity.



TTL flash metering



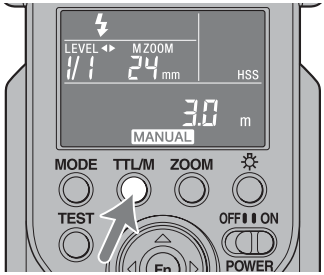
Manual flash metering

1 Select the M mode on the camera.

Continued on the next page

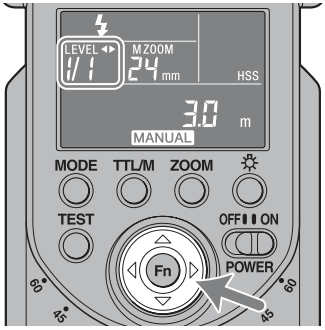
2 Press the TTL/M button to display MANUAL on the LCD panel.

- The modes change in the following order.
  TTL , MANUAL , MULTI

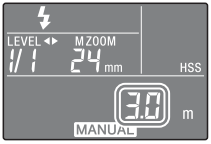


3 Press the ◁ or ▷ button to select the power level to be set.

- The power level is changed in following order.
  1/1 → 1/2 → 1/4 → 1/8 → 1/16 → 1/32



- When the shutter button is pressed halfway down, the distance at which the proper exposure is obtained appears on the LCD panel.



Proper exposure is obtained at less than 1.5 m.

Proper exposure is obtained at more than 28 m.

- In manual flash photography, if the power level is set at 1/1 then the flash will go off at full power. The power level range (e.g. 1/1 → 1/2) corresponds to the aperture range (e.g. F4 → 5.6).
- The flash range check indication of the TEST button (blinks in green) does not work after a photo is taken with the manual flash.
- Using custom functions, manual flash may be selected without changing the camera to the M mode (page 74).

Continued on the next page

TTL flash

Manual flash provides a fixed flash intensity irrespective of the brightness of the subject and the camera setting. TTL* flash measures the light from the subject that is reflected through the lens.

TTL metering also has a P-TTL metering function, which adds a pre-flash to TTL metering, and an ADI metering function, which adds distance data to the P-TTL metering.

This flash unit defines all P-TTL and ADI metering as TTL flash and TTL is displayed on the LCD panel.

*TTL = through the lens

- ADI metering is possible in combination with a lens with a built-in distance encoder. Before using the ADI metering function, check whether your lens has a built-in distance encoder by referring to the specifications in the operating instructions supplied with your lens.

High-speed sync (HSS)

High-speed sync

Normal flash

High-speed sync eliminates the restrictions of flash sync speed and enables the flash to be used through the entire shutter speed range of the camera. The increased selectable aperture range allows flash photography with a wide aperture, leaving the background out of focus and accentuating the front subject. Even when photographing at a wide f-stop in the A mode or M mode of the camera, when the background is very bright and the shot will normally be over-exposed, you can adjust the exposure by using the high-speed shutter.

For details on setting the HSS features, see “Custom setting” (page 74).

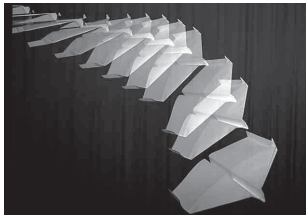
Flash Sync Speed

Flash photography is generally associated with a maximum shutter speed referred to as the flash sync speed. This restriction does not apply to cameras designed for high-speed sync (HSS) photography, since they allow flash photography at the maximum shutter speed of the camera.

Multiple flash (MULTI)

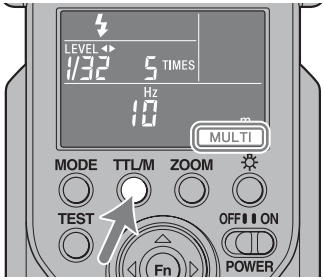
The flash is triggered a number of times while the shutter is open (multiple flash). Multiple flash allows motion of the subject to be captured in a photograph for later analysis.

- The camera must be set to the M mode for multiple flash photography.



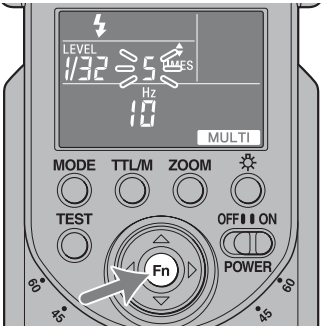
1 Set the camera to the M mode.

2 Press the TTL/M button to display MULTI on the LCD panel.



3 Press the Fn button to make [TIMES] blink.

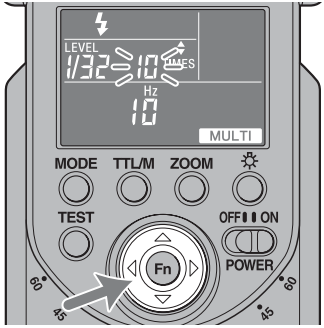
- The current number of flashes for multiple flash is displayed on the LCD panel.



Continued on the next page

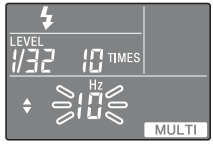
4 Press the △ or ▽ button to select the number of flashes.

- The number of flashes may be selected from the following.
  - -, 100, 90, 80, 70, 60, 50, 45, 40, 35, 30, 25, 20, 15, 10, 9, 8, 7, 6, 5, 4, 3, 2
- Keep the △ or ▽ button pressed down to repeatedly change the value.
- When "--" is selected, flashes continue at the set frequency while the shutter is open.



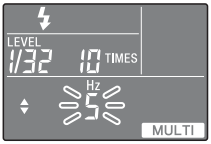
5 Press the Fn button to make [Hz] blink.

- The current multiple flash frequency (flashes per second) is displayed on the LCD panel.



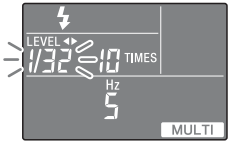
6 Press the △ or ▽ button to select the flash frequency.

- The flash frequency may be selected from the following.
  100, 90, 80, 70, 60, 50, 40, 30, 20, 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
- Keep the △ or ▽ button pressed down to repeatedly change the value.



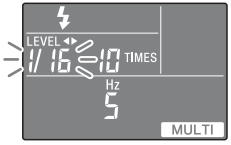
7 Press the Fn button to make the power-level indicator blink.

- The current power level is displayed.



8 Press the ◁ or ▷ button to select the power level to be set.

- The power level may be selected from the following.
  1/8, 1/16, 1/32



Continued on the next page

9 Press the Fn button.

10 Set the shutter speed and aperture.

- The shutter speed is calculated as follows to suit the selected flash frequency and number of flashes.
  Number of flashes (TIME) ÷ Flash frequency (Hz) = Shutter speed
  For example, when ten flashes and 5 Hz are selected, 10 ÷ 5 = 2 requires a shutter speed of longer than two seconds.

11 When the flash is fully charged, press the shutter button to take the photo.

- The distance at which the proper exposure is obtained with a single flash is displayed on the LCD panel.
- To prevent shaking, the use of a tripod is recommended during multiple flash photography.
- Test flash will flash at the selected frequency/number/level while the TEST button is being pressed if [TEST1] is selected in the custom setting. When [TEST3] or [TESTM] is selected, the flash three times or the four second modeling flash has priority.
- The use of custom settings allows the camera to be set up for multiple flash photography without selecting the M mode (page 74).

Maximum number of continuous flashes

The maximum number of continuous flashes during multiple flash photography is limited by the charge in the battery. Use the following values as a guide.

With alkaline batteries

Power level	Flash frequency (Hz)																		
	100	90	80	70	60	50	40	30	20	10	9	8	7	6	5	4	3	2	1
1/8	4	4	4	4	4	4	4	4	4	5	5	6	6	6	7	8	10	14	14
1/16	8	8	8	8	8	8	8	8	8	10	15	15	15	20	20	20	35	40	100
1/32	14	14	14	14	14	18	18	20	20	25	35	35	40	50	50	50	50	100	100*

*100 signifies more than 100.

With nickel-metal hydride batteries (When using 2500 mAh)

Power level	Flash frequency (Hz)																		
	100	90	80	70	60	50	40	30	20	10	9	8	7	6	5	4	3	2	1
1/8	4	4	4	4	4	4	5	5	5	7	7	7	7	10	10	15	20	50	100
1/16	8	8	8	8	8	9	10	10	10	15	15	15	20	20	30	50	100	100*	100*
1/32	15	17	17	17	18	18	18	20	25	50	60	70	70	70	70	100*	100*	100*	100*

*100 signifies more than 100.

- The maximum number of flashes varies with the type of battery and its condition. If an External Battery Adaptor FA-EB1AM (optional) is used, the maximum number of flashes increases beyond the values given above.

Wireless flash mode (WL)

Photographs taken with the flash unit attached to the camera are flat as shown in photo ①. In such cases, remove the flash unit from the camera and position it to obtain a more three-dimensional effect as shown in photo ②. And by using 2 or more flash units, you can create more detailed light conditions as shown in photo ③.

When taking this type of photograph with a single lens reflex camera, the camera and the flash unit are most commonly connected by a cable. This flash eliminates the need for a cable to transmit signals to the flash unit by using the light of the flash itself as a signal. The correct exposure is determined automatically by the camera.

Normal flash

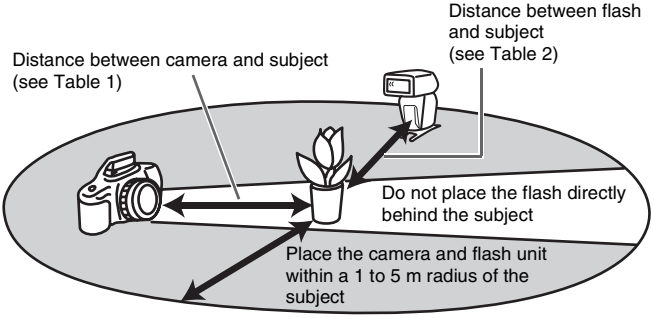
Wireless flash

Wireless flash
(Lighting ratio control mode)

Wireless Flash Range

The wireless flash uses a light signal from the flash as a trigger to operate the off-camera flash unit. Follow the points below when positioning the camera, flash, and subject.

- Photograph in dark locations indoors.
- If you rotate the flashtube using the bounce-flash function (page 36) so that the wireless control-signal receiver points toward the camera, it will be easier for the flash to receive signals from the camera.
- Place the off-camera flash within the gray area in the following diagram.


Distance between flash and subject (see Table 2)
Distance between camera and subject (see Table 1)
Do not place the flash directly behind the subject
Place the camera and flash unit within a 1 to 5 m radius of the subject

Continued on the next page

Distance camera-HVL-F58AM-subject

	Distance camera-subject (Table 1)	Distance HVL-F58AM - subject (Table 2)				
		Other than HSS	HSS			
Shutter speed / Aperture	All shutter speeds	Sync speed or slower	1/250 sec	1/500 sec	1/1000 sec	1/2000 sec
2.8	1.4 - 5	1.4 - 5	1 - 3.5	1 - 2.5	1 - 1.7	1 - 1.2
4	1 - 5	1 - 5	1 - 2.5	1 - 1.7	1 - 1.2	–
5.6	1 - 5	1 - 5	1 - 1.7	1 - 1.2	–	–

Units: m

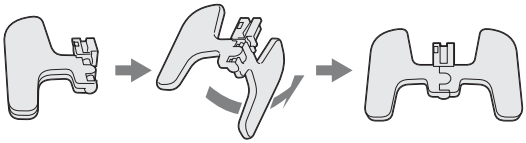
- The distances in the above table assume the use of ISO 100. If ISO 400 is used the distances must be multiplied by a factor of two (assume a limit of 5 m).
- The flash range is not displayed on the LCD panel when using wireless flash.

Notes on wireless flash

- You cannot use a flash meter or color meter in wireless flash mode because the pre-flash goes off.
- Test flash for the wireless flash is in the currently selected test flash mode. One flash occurs with [TEST1] and three flashes with [TEST3]. Flashes continue for four seconds with [TESTM]. For details of test flash, See “Custom setting” (page 74).
- The zoom position for the HVL-F58AM is automatically set to 24 mm. A zoom position other than 24 mm is not recommended.
- In wireless flash mode, ADI metering is canceled and P-TTL flash metering is used automatically (page 43).
- Multiple flash cannot be used.
- If another wireless flash is being used nearby, you can change the channel in the custom settings to prevent interference (page 74).
- When photographing with the wireless flash, the flash unit may in rare cases go off by mistake due to ambient static electricity or electromagnetic noise. When the flash is not in use, select [(ϟ)] using the MODE button.
- The flash unit may in rare cases provide incorrect luminescence because the signal light does not reach the subject, etc,. due to the position in which the wireless flash was installed. In this case you can prevent incorrect luminescence by changing the installation position of the wireless flash or changing the wireless channel setting in the custom setting (page 74).

Opening and closing the mini-stand

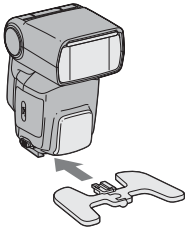
- The mini-stand is collapsible and must be open when used.



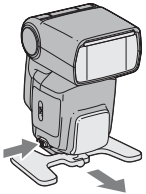
Attaching and removing the mini-stand

- Use the supplied mini-stand when the flash unit is separate from the camera.

Attachment



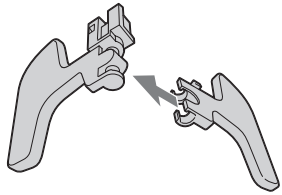
Removal



- You can attach the flash unit to a tripod using the tripod socket holes in the mini-stand. Use the tripod equipped with the screw under 5.5 mm. Because the tripod equipped with the screw over 5.5 mm cannot hold the mini-stand firmly, mini-stand may be damaged.

Continued on the next page

• When mini-stand break into each part, fit the part of shaft into the other part.



Possible wireless flash photography for this flash unit

The following methods for wireless flash photography can be used with this flash unit.

[1] Wireless flash photography when the camera has a built-in flash

By using the camera's built-in flash as a controller, this flash unit can fire as a off-camera flash.

[2] Wireless flash photography when the camera does not have a built-in flash (without lighting ratio control)

Even if the camera does not have a built-in flash, you can take a photo with wireless flash by using this flash unit as a controller and the another flash unit as off-camera flash.

[3] Wireless flash photography with lighting ratio control

You can take a photo with wireless flash while controlling the lighting ratio of some groups of flash units by using this flash unit as a controller.

(1) When using HVL-F58AM/HVL-F42AM as off-camera flash, you can control the lighting ratio up to 3 groups ([CTRL], [RMT], [RMT2]). You can use this function with DSLR-A900/A700.

(2) When using HVL-F56AM/HVL-F36AM as off-camera flash, you can control the lighting ratio of the 2 groups ([CTRL], [RMT]). You can use this function with a DSLR-A900.

- For details, see “Combination of camera, off-camera flash and controller.”
- You can use several off-camera flashes at the same time.
- The off-camera flash fires with the power level set in each flash when the off-camera flash is in the MANUAL mode.
- In this manual, “controller” means the flash unit attached to a camera, and “off-camera flash” means the flash unit removed from a camera for use.

Combination of camera, off-camera flash and controller

Types		Camera*1	Off-camera flash*1	Controller*2
[1]With built-in flash		Sony digital single lens reflex cameras with built-in flash	HVL-F58AM/HVL-F42AM/HVL-F56AM/ HVL-F36AM	Camera’s built-in flash
[2]Without built-in flash		Cameras without built-in flash DSLR-A900	HVL-F58AM*3/HVL-F42AM	HVL-F58AM: [CTRL1] mode*4
			HVL-F58AM/HVL-F42AM/HVL-F56AM/ HVL-F36AM	HVL-F58AM: [CTRL2] mode*4*5
[3]Lighting ratio control	[3]-(1) Control up to 3 groups	DSLR-A700/ DSLR-A900	HVL-F58AM /HVL-F42AM*6	HVL-F58AM: [CTRL1] mode*4
	[3]-(2) Control of 2 groups	DSLR-A900	HVL-F58AM/HVL-F42AM/HVL-F56AM/ HVL-F36AM	HVL-F58AM: [CTRL2] mode*4*5

*1 For details about cameras and flash units that is not listed above, see the operating instructions supplied with each product.

*2 When using DSLR-A100/A200/A300/A350, this flash unit cannot be set to controller mode. If the flash unit is already set to controller mode, the setting is canceled automatically. For other cameras, see the operating instructions supplied with each camera.

*3 Set the wireless control/remote mode to [RMT].

Continued on the next page

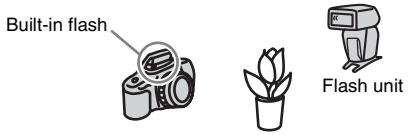
*4 This flash unit has two wireless control modes, [CTRL1] and [CTRL2]. The wireless controller indicator on the LCD panel is displayed as follows.
[CTRL1] mode: [CTRL+]
When using HVL-F58AM/HVL-F42AM as off-camera flash, select this mode.
[CTRL2] mode: [CTRL]
When using HVL-F56AM/HVL-F36AM as off-camera flash, select this mode.
When you change the controller mode, set [C03] in the custom setting (page 74).

*5 When using DSLR-A700, this flash unit cannot be set to [CTRL](CTRL2). If the flash unit is already set to [CTRL], the setting is canceled automatically. For other cameras, see the operating instructions supplied with each camera.

*6 HVL-F42AM used as off-camera flash is included in the [RMT] group.

[1] Wireless flash photography with built-in flash of the camera

Use only an off-camera flash unit, using the light from the built-in flash as a signal.



1 Attach the flash unit to the camera and turn the power of the flash unit and camera on.

2 Set the camera to wireless flash.

- The setting method differs depending on the camera used. For details, refer to the operating instructions of your camera.
- When the camera is set to wireless the flash is also set to wireless automatically, and WL is displayed on the LCD panel.
  The flash channel information is transmitted to the camera.
- The light level can be changed even for the wireless flash mode. For details, refer to page 74.

3 Remove the flash unit from the camera and raise the built-in flash.

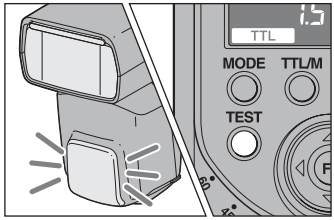
4 Set up the camera and flash unit.

- Set up the camera and flash unit in a dark location, such as indoors.
- See page 55 for details.

Continued on the next page

5 Make sure that the built-in flash and flash unit are fully charged.

- " ϟ " is lit in the viewfinder when the built-in flash is fully charged.
- When the flash unit is fully charged in the wireless flash mode, the AF illuminator on the front blinks, and the TEST button is lit in amber.



6 Use test-flash to check the flash.

- Make sure that the wireless remote mode of the flash unit is set to [RMT] or [RMT2].
- During wireless flash photography, the test-flash method differs depending on the camera used. For details, refer to the operation instructions of your camera.
- If the test-flash does not work, change the position of the camera, flash, and subject, or point the wireless control-signal receiver towards the camera.

7 Check again that the built-in flash and the flash unit are fully charged, and press the shutter button to take the photo.

Setting wireless flash by flash only

Once you have performed the wireless flash setup in step [1], if you continue to use the same camera and flash combination without changing the wireless channel then you can also set the flash and camera separately to wireless.

Camera setting:
Set the camera to the wireless flash mode.

For details, refer to the operating instructions supplied with your camera.

Flash setting:

1 Press the TTL/M button to display TTL or MANUAL.

- When selecting MANUAL, the flash unit fires with the power level to be set.

2 Press the MODE button repeatedly to display [ϟWL].

3 Press the Fn button.

4 Press the ◁ or ▷ button to make [RMT] or [RMT2] blink.

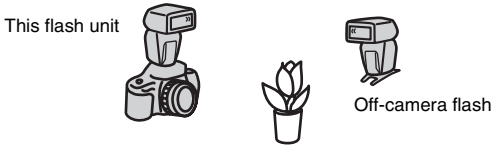
5 Press the Fn button.

- Make sure that the wireless channel of the off-camera flash is set to the same channel as the controller. For details on setting the wireless channel, see “Custom setting” (page 74).

Continued on the next page

[2] Wireless flash photography without built-in flash of camera

You can take a photo with wireless flash by using 2 flash units, one as a controller and the other as an off-camera flash unit, even if the camera does not have a built-in flash.
This flash unit must be used as the controller.



1 Set the camera, flash (controller), flash (off-camera flash) to wireless flash.

Camera Setting:
Set the camera to wireless flash.

For details, refer to the operating instructions supplied with your camera.

Controller Setting:

1. **Press the MODE button repeatedly to display [ϟWL].**
2. **Press the Fn button.**
3. **Press the ◁ or ▷ button to make [CTRL] blink.**
4. **Press the Fn button.**

5 Press the ◁ or ▷ button to make RATIO [OFF] blink.

6 Press the Fn button.

- [CTRL+] or [CTRL] is displayed.

Off-camera flash setting:

Set the wireless flash while the flash unit is attached to the camera, and then remove it from the camera. For details, refer to the operating instructions supplied with the external flash. When the HVL-F58AM is used as the off-camera flash, see page 63, and set the remote mode to [RMT].

2 Attach the controller to the camera, and turn on the power of the camera, controller, off-camera flash.

3 Set up the camera with the controller and the off-camera flash.

- See page 55 for details.

4 Make sure that the controller and the flash unit are fully charged.

- When the flash unit is fully charged in the wireless flash mode, the AF illuminator on the front blinks, and the TEST button is lit in amber.

5 Use test-flash to check the flash.

- The test-flash method differs depending on the camera used. For details, refer to the operating instructions of your camera.
- If the test-flash does not work, change the position of the camera, flash, and subject, or point the wireless control-signal receiver towards the camera. Moreover, make sure that wireless channel of the off-camera flash is set to the same channel as the controller.

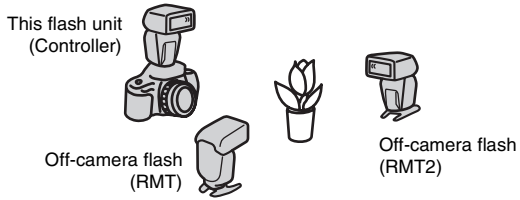
Continued on the next page

6 Check again that the controller and the flash unit are fully charged, and press the shutter button to take the photo.

- Even if RATIO is set to [OFF], the controller flashes to transmit a signal.

[3] Wireless flash photography with the lighting ratio control

You can take a photo with wireless flash while controlling the lighting ratio of the controller and 2 groups of off-camera flash units (RMT, RMT2).



- Any combination of HVL-F58AM/HVL-F42AM/HVL-F56AM/HVL-F36AM can be used in a group with [RMT]. For [RMT2], only HVL-F58AM that is set to [CTRL1] can be used in a group.
- When using HVL-F56AM/HVL-F36AM as off-camera flash, set the controller mode to [CTRL2]. In [CTRL2] mode, you can control the lighting ratio of only 2 groups. For details on setting the controller mode, see [C03] in "Custom setting" (page 74).
- The whole power level ratio is displayed using the flash-range/multiple-flash frequency/flash-ratio display on the LCD panel for the wireless flash photography with the lighting ratio control.
  e.g.)
  When a display is [4:2:1], the flash of each group fires with power level of 4/7, 2/7 and 1/7 of the whole.

1 Set the camera, flash (controller), and flash (off-camera flash) to wireless flash.

Camera Setting:
Set the camera to wireless flash.

For details, refer to the operating instructions supplied with your camera.

Controller Setting:

1 Press the MODE button repeatedly to display [ϟWL].

2 Press the Fn button.

3 Press the ◁ or ▷ button to make [CTRL] blink.

4 Press the Fn button.

5 Press the ◁ or ▷ button to make RATIO [ON] blink.

6 Press the Fn button.

7 Press the △ or ▽ button to select the lighting ratio.

- The lighting ratio may be set to the following.
  1, 2, 4, 8, 16, --*
  * The flash unit cannot flash when the lighting ratio is set to [--].

8 Press the ◁ or ▷ button to select the lighting ratio of the controller and off-camera flash units (RMT, RMT2).

- Set the power level ratio to [--] on the flash unit when there is an off-camera flash (RMT/RMT2) you don't want to fire when you use the flash unit with the controller after setting the flash unit to [CTRL1].

9 Press the Fn button.

10 Press the TTL/M button to display TTL.

- When MANUAL is selected, manual setting flash is used with the lighting ratio control.

Continued on the next page

Off-camera flash setting:

Set the wireless flash while the flash unit is attached to the camera, and then remove it from the camera. For details, refer to the operating instructions supplied with the external flash. When the HVL-F58AM is used as the off-camera flash, see page 63.

2 Attach the controller to the camera, and turn on the power of the camera, controller, and off-camera flash.

3 Set up the camera with the controller and the off-camera flash.

- See page 55 for details.

4 Make sure that the controller and the flash unit are fully charged.

- When the flash unit is fully charged in the wireless flash mode, the AF illuminator on the front blinks, and the TEST button is lit in amber.

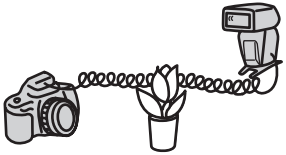
5 Use test-flash to check the flash.

- The test-flash method differs depending on the camera used. For details, refer the operating instructions of your camera.
- If the test-flash does not work, change the position of the camera, flash and subject, or point the wireless control-signal receiver towards the camera. Moreover, make sure that the wireless channel of the off-camera flash is set to the same channel as the controller.

6 Check again that the controller and the flash unit are fully charged, and press the shutter button to take the photo.

Connecting camera and flash by cable

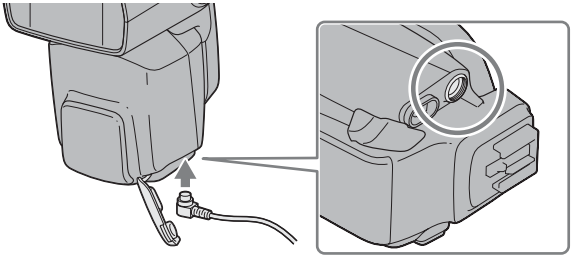
Using the off-camera cables FA-CC1AM (optional) allows photography with flash units separate from the camera. Up to four flash units can be connected together. Being able to take photographs without having to consider the positioning of the flash unit provides considerable freedom to create a variety of shadow effects on the subject.



- Flash units with accessory terminals can be connected directly.

1 Remove the terminal cap.

2 Plug the cable into the accessory terminal.



Continued on the next page

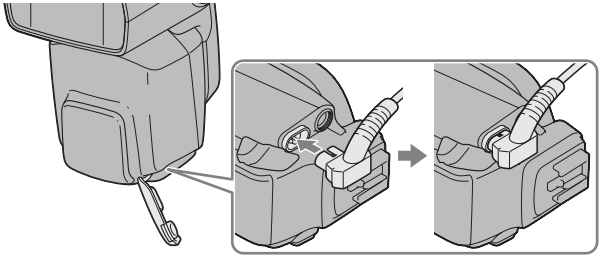
- In this mode, ADI metering will be canceled and Pre-flash TTL metering will be used automatically (page 43).
- High-speed sync in the P mode cannot be used when the flash is connected with the off-camera cable FA-CC1AM (optional).
- All the flash units are at the same power level in TTL flash mode.
- During photography with off-camera cable, the wireless controller mode is canceled automatically and you cannot use the flash photography with lighting ratio control.

Using external battery adaptor

You can use an External Battery Adaptor FA-EB1AM (optional) as an external power supply.

1 Remove the terminal cap.

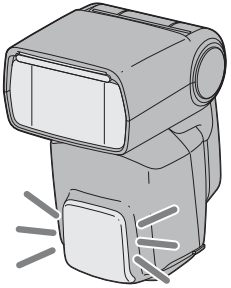
2 Insert the plug of connection cable into the external power terminal.



- Use an external battery adaptor or cable for this flash unit for the external power terminal or accessory terminals.

AF illuminator

In low-light or when subject contrast is low, when the shutter button is pressed halfway down for Auto Focus, the red lamp on the front of the flash unit will light. This is the AF illuminator used as an aid in Auto Focus.

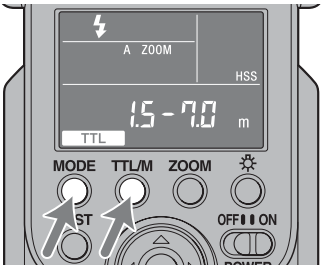


- The AF illuminator operates even when [ ] is displayed on the LCD panel.
- The camera AF illuminator does not operate while the flash AF illuminator is operating.
- The AF illuminator does not operate while Continuous AF is used in focusing mode (when continually focusing on a moving subject).
- The AF illuminator may not operate if the focal length of the lens is greater than 300 mm. The flash unit will not operate when removed from the camera.

Reset to the default settings

Press the MODE and TTL/M buttons together for three seconds.

Most flash functions return to their default settings.



Item	Default settings	Page
Flash on/off	On (Auto or)	22
Flash coverage (zoom)	Auto zoom (105 mm)	32
Flash mode (TTL/M/MULTI)	TTL	43, 48
Wireless flash (WL)	RMT	54
Lighting ratio	1:1:1	66
Power level in TTL/M (LEVEL)	1/1	43, 48
Power level in multiple flash (LEVEL)	1/32	48
Frequency in multiple flash (Hz)	5	48
Repetition in multiple flash (TIMES)	10	48

Custom setting is not reset.

Custom setting

The various flash settings may be changed as necessary.
The following eight items may be changed.

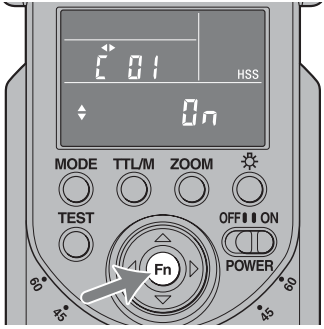
- HSS setting (on/off)
- Wireless channel setting (channels 1 to 4)
- Wireless controller mode setting (1/2)
- Recording mode in which manual flash or multiple-flash may be set (M mode only/all modes)
- Test-flash setting (once/3 times/4 seconds)
- Time to power save (30 seconds/3 minutes/30 minutes/none)
- Time to power save when using wireless flash (60 minutes/none)
- Flash range units (m/ft)

Performing the custom setting

The custom setting is changed as follows.

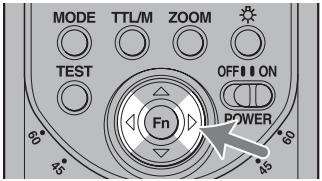
1 Press the Fn button for three seconds while the POWER switch is set to ON.

- The first item (HSS setting) is displayed.



2 Press the ◁ or ▷ button to select the item.

For details on the each setting, refer to “Changing the custom setting” (page 78).



3 Press the Fn button to finish the custom setting.

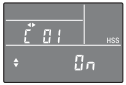
- The LCD panel returns to the original display.
- When a setting other than the default setting is selected in C03, C04, C06 or C07, C remains on the LCD panel.
- The selected settings are maintained even if the flash unit is switched off or the battery is removed.

Continued on the next page

Select with the △ button or ▽ button

Select with the ◁ button or ▷ button

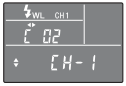
C01. HSS setting



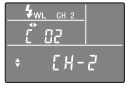
on

off

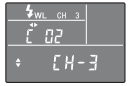
C02. Wireless channel setting



Channel 1



Channel 2



Channel 3

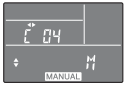
Channel 4

C03. Wireless controller mode setting

Control 1

Control 2

C04. Recording mode in which manual flash or multiple-flash may be set

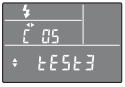


M mode only

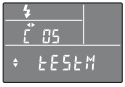
All modes

C05. Test-flash setting

Once

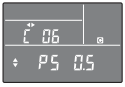


3 times

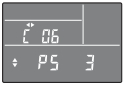


4 seconds

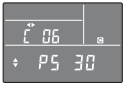
C06. Time to power save



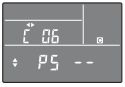
30 seconds



3 minutes

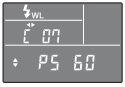


30 minutes

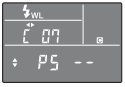


none

C07. Time to power save when using wireless flash



60 minutes



none

C08. Flash range units

m

ft

Continued on the next page

Changing the custom setting

This is an explanation of how to change each custom setting is given below.

To set the high-speed sync (C01)

You can set the high-speed sync.

Press the △ or ▽ button to select [ON].

- The display switches between [ON] and [OFF].
- This flash unit is set to high-speed sync automatically when the shutter speed is set faster than flash sync speed. Flash sync speed may differ depending on the camera. For further details of flash sync speed, refer to operating instructions supplied with your camera.
- Taking photos in bright locations is recommended.
- High-speed sync cannot be used with bounce flash.
- Using a flash meter or color meter with high-speed sync is not recommended because it interferes with achieving the proper exposure and color.
- The flash range becomes shorter than that of normal flash photography when the high speed sync is used. Make sure that the subject is in the flash range.
- You can also use the high speed sync with when using wireless flash photography.
- If you select [OFF], high-speed sync is cancelled. When high-speed sync is cancelled, the shutter speed cannot be set faster than the sync speed.

To change the channel setting of the wireless flash (C02)

You can change the wireless channel to prevent interference when another flash is used nearby.

Press the △ or ▽ button to select the desired setting.

- The display is changed in the following order.
  [CH-1] ⟷ [CH-2] ⟷ [CH-3] ⟷ [CH-4] ⟷ . . .
- Attach the flash unit to the camera and press the shutter button partway down after changing the channel.

To select wireless control mode (C03)

You can change the wireless control mode. This flash unit has two controller modes, [CTRL1] and [CTRL2]. The wireless controller indicator on the LCD panel is displayed as follows.
[CTRL1] mode: [CTRL+]
When using HVL-F58AM/HVL-F42AM as off-camera flash, select this mode.
[CTRL2] mode: [CTRL]
When using HVL-F56AM/HVL-F36AM as off-camera flash, select this mode.

Press the △ or ▽ button to select the wireless control mode.

- The display switches between [CTRL1] and [CTRL2].

To change the recording mode that can use the manual flash mode (M) and multiple flash mode (C04)

You can change the recording mode that can use the manual flash mode (M) and multiple flash mode.

Press the △ or ▽ button to select the recording mode that can use the manual flash mode and multiple flash mode.

- The display is changed as following.
  M: (corresponds M mode of the camera only)
  PASM: (corresponds all modes of the camera)
- When [PASM] is selected, manual flash photography and multiple flash photography may be used in all recording modes of your camera. The proper exposure may not be obtained with photography in modes other than the M mode of your camera, therefore we recommend the M mode of your camera.
- This flash unit is set to TTL flash mode when you set the recording mode of the camera to [AUTO].

Continued on the next page

To change the test-flash mode (C05)

You can change the flashing method when using test-flash.

Press the △ or ▽ button to select the test-flash setting.

- The display is changed in the following order.
  [TEST1] ⟷ [TEST3] ⟷ [TESTM] ⟷ . . .
  [TEST1] : flashes once at the set light level.
  [TEST3] : flashes three times at a specific rate.
  [TESTM] : flashes for four seconds at a specific rate.

To change the time to power save (C06)

You can change the time to power save.

Press the △ or ▽ button to select the desired time until power save.

- The display is changed in the following order.
  [PS 0.5] ⟷ [PS 3] ⟷ [PS 30] ⟷ [PS --] ⟷ [PS 0.5] ⟷ . . .
  [PS 0.5] : changes to power save mode after 30 seconds.
  [PS 3] : changes to power save mode after 3 minutes.
  [PS 30] : changes to power save mode after 30 minutes.
  [PS --] : disables power save mode.

To change the time to power save when using wireless flash (C07)

You can change the time to power save when using wireless flash.

Press the △ or ▽ button to select the time until power save when using wireless flash.

- The display switches between [PS 60] and [PS --].
  [PS 60] : changes to power save mode after 60 minutes.
  [PS --] : disables power save mode.

To change the flash range units (C08)

You can change the flash range units displayed.

Press the △ or ▽ button to select the units.

- The display switches between [m] and [ft].

Notes on use

While shooting

- This flash unit generates strong light, so it should not be used directly in front of the eyes.
- Do not use the flash 20 times in a row or in quick succession in order to prevent heating and degradation of the camera and flash unit. (when the power level is 1/32, 40 times in a row.)
  Stop using the flash unit and cool it for 10 minutes or more, if the flash is triggered up to the limit for the number of times in quick succession.
- Attach the camera while the flash unit is turned off.
  If you do not do so, you may cause a malfunction of the flash unit or the use of an incorrect luminescence, and the powerful light may damage your eyes.
- Do not use the flash near people when rotating the flashtube during bounce photography. The flash light may damage the eyes, or the hot flashtube may cause a burn.

Batteries

- The battery level displayed on the LCD panel may be lower than the actual battery capacity, due to temperature and storage conditions. The displayed battery level is restored to the correct value after the flash has been used a few times.
- Nickel-metal hydride batteries can lose power suddenly. If the low-battery indicator starts blinking or the flash can no longer be used while taking pictures, change or recharge the batteries.
- The flash frequency and number of flashes provided by new batteries may vary from the values shown in the table, depending on the time elapsed since manufacture of the batteries.

Continued on the next page

- Remove the batteries only after turning the power off and waiting several minutes, when changing the batteries. The batteries may be hot, depending on the battery type. Remove them carefully.
- Remove and store the batteries when you do not intend to use the camera for a long time.

Temperature

- The flash unit may be used over a temperature range of 0 °C to 40 °C.
- Do not expose the flash unit to extremely high temperatures (e.g. in direct sunlight inside a vehicle) or high humidity.
- To prevent condensation forming on the flash, place it in a sealed plastic bag when bringing it from a cold environment into a warm environment. Allow it to reach room temperature before removing it from the bag.
- Battery capacity decreases at colder temperatures. Keep your camera and spare batteries in a warm inside pocket when shooting in cold weather. The low-battery indicator may blink even when there is some power left in the batteries in cold weather. Batteries will regain some of their capacity when warmed to normal operating temperature.
- This flash unit is not waterproof. Be careful not to bring it into contact with water or sand when using it at the seashore, for example. Contact with water, sand, dust, or salt may result in a malfunction.

Maintenance

Remove this unit from the camera. Clean the flash with a dry soft cloth. If the flash has been in contact with sand, wiping will damage the surface, and it should therefore be cleaned gently using a blower. In the event of stubborn stains, use a cloth lightly dampened with a mild detergent solution, and then wipe the unit clean with a dry soft cloth. Never use strong solvents, such as thinner or benzine, as these damage the surface finish.

Specifications

Guide number

Normal flash (ISO100)

Manual flash/35mm-format

Power level	Flash coverage setting (mm)						
	16*	24	28	35	50	70	105
1/1	17	29	31	36	42	48	58
1/2	11.9	20.8	21.8	25.1	29.6	34.2	41.0
1/4	8.4	14.7	15.4	17.8	20.9	24.2	29.0
1/8	5.9	10.4	10.9	12.6	14.8	17.1	20.5
1/16	4.2	7.4	7.7	8.9	10.5	12.1	14.5
1/32	3.0	5.2	5.4	6.3	7.4	8.6	10.3

* When the wide panel is attached.

APS-C format

Power level	Flash coverage setting (mm)						
	16*	24	28	35	50	70	105
1/1	17	31	36	42	48	52	58
1/2	11.9	21.8	25.1	29.6	34.2	36.8	41.0
1/4	8.4	15.4	17.8	20.9	24.2	26.0	29.0
1/8	5.9	10.9	12.6	14.8	17.1	18.4	20.5
1/16	4.2	7.7	8.9	10.5	12.1	13.0	14.5
1/32	3.0	5.4	6.3	7.4	8.6	9.2	10.3

* When the wide panel is attached.

HSS flat flash (ISO100)

Manual flash/35mm-format

Shutter speed	Flash coverage setting (mm)						
	16*	24	28	35	50	70	105
1/250	6.7	11.8	12.9	14.8	17.3	19.5	22.4
1/500	4.7	8.4	9.1	10.5	12.2	13.8	15.9
1/1000	3.3	5.9	6.4	7.4	8.6	9.8	11.2
1/2000	2.4	4.2	4.6	5.2	6.1	6.9	7.9
1/4000	1.7	3.0	3.2	3.7	4.3	4.9	5.6
1/8000	1.2	2.1	2.3	2.6	3.1	3.5	4.0
1/12000	0.8	1.5	1.6	1.8	2.2	2.4	2.8

* When the wide panel is attached.

APS-C format

Shutter speed	Flash coverage setting (mm)						
	16*	24	28	35	50	70	105
1/250	6.7	12.9	14.8	17.3	19.5	20.9	22.4
1/500	4.7	9.1	10.5	12.2	13.8	14.8	15.9
1/1000	3.3	6.4	7.4	8.6	9.8	10.5	11.2
1/2000	2.4	4.6	5.2	6.1	6.9	7.4	7.9
1/4000	1.7	3.2	3.7	4.3	4.9	5.2	5.6
1/8000	1.2	2.3	2.6	3.1	3.5	3.7	4.0
1/12000	0.8	1.6	1.8	2.2	2.4	2.6	2.8

* When the wide panel is attached.

Frequency/Repetition

	Alkaline	Nickel hydride (2500 mAh)
Frequency (sec)	Approx. 0.1 - 5	Approx. 0.1 - 3
Repetition (times)	Approx. 100 or more	Approx. 200 or more

- Repetition is the approximate number of times that are possible before a new battery is completely dead.

Continuous flash performance	40 flashes at 5 flashes per second (Normal flash, light level 1/32, 105 mm, nickel-metal hydride battery)
AF illuminator	Autoflash at low contrast and low brightness Operating range (with a 50 mm lens attached to DSLR-A700) Central area: 0.5 m to 10 m Peripheral areas : 0.5 m to 3 m
Flash control	Flash control using pre-flash, TTL direct metering
Dimension (Approx.)	W 77 × H 147 × D 106 mm (3 1/8 × 5 7/8 × 4 1/4 inches)
Mass (Approx.)	440 g (15.6 oz) (excluding the batteries)
Power requirements	DC 6 V
Recommended batteries	Four AA-size alkaline batteries Four AA-size rechargeable nickel-metal hydride batteries
Included items	Flash unit (1), Mini-stand (1), Case (1), Set of printed documentation

Functions in these operating instructions depend on testing conditions at our firm. Design and specifications are subject to change without notice.

Trademark

α is a trademark of Sony Corporation.

http://www.sony.net/

Printed in China